

CLAIMS

1. A process for coating a substrate giving a polished effect, comprising the steps of:

5 applying a polymeric coating over the substrate;

applying at least one atomized metal over the polymeric coating to form a metal layer;

10 applying a corrosion inhibiting inorganic coating to the metal layer; and

applying a transparent top coating over the corrosion inhibiting inorganic coating to form a protective layer.

15 2. The process of claim 1 wherein the corrosion inhibiting inorganic coating is selected from the group consisting of one or more oxide, salt, and combination thereof of a metal selected from the group consisting of aluminum, cadmium, cobalt, cesium, copper, manganese, molybdenum, nickel, silicon, titanium, zinc, and zirconium.

20 3. The process of claim 1 wherein the atomized metal is applied by plasma vapor deposition, chemical vapor deposition or thermal deposition.

4. The process of claim 1 wherein the top coating comprises an organic coating.

25 5. The process of claim 1 wherein the top coating comprises a ceramic coating.

6. The process of claim 1 wherein the top coating comprises an organopolysiloxane coating.

7. The process of claim 1 wherein the top coating is applied by liquid spray, powder spray, electrocoating, or dip coating.

8. The process of claim 1 further comprising the step of coating an adhesion 5 promoting layer over the polymeric coating, prior to applying the at least one atomized metal.

9. The process of claim 1 wherein the substrate is selected from the group consisting of a metal, metal alloy, glass, plastic and ceramic.

10. A process for coating a substrate giving a polished effect, comprising the steps of:

applying a first corrosion inhibiting inorganic coating to the substrate;

applying a polymeric coating over the first corrosion inhibiting inorganic coating;

applying at least one atomized metal over the polymeric coating to form a metal layer;

applying a second corrosion inhibiting inorganic coating to the metal layer; and

applying a transparent top coating over the second corrosion inhibiting inorganic coating to form a protective layer;

wherein the first and second corrosion inhibiting inorganic coatings may be the same or different.

11. The process of claim 10 wherein the first and second corrosion inhibiting inorganic coatings is selected from the group consisting of one or more oxide, salt, and combination thereof of a metal selected from the group consisting of aluminum, 25 cadmium, cobalt, cesium, copper, manganese, molybdenum, nickel, silicon, titanium, zinc, and zirconium.

12. The process of claim 10 wherein the atomized metal is applied by plasma vapor deposition, chemical vapor deposition or thermal deposition.

13. The process of claim 10 wherein the top coating comprises an organic coating.

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14. The process of claim 10 wherein the top coating comprises a ceramic coating.

15. The process of claim 10 wherein the top coating comprises an organopolysiloxane coating.

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16. The process of claim 10 wherein the top coating is applied by liquid spray, powder spray, electrocoating, or dip coating.

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17. The process of claim 10 further comprising the step of coating an adhesion promoting layer over the polymeric coating, prior to applying the at least one atomized metal.

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18. The process of claim 10 wherein the substrate comprises a metal or metal alloy.

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19. A multi-layer coating having a polished effect for the surface of an article of manufacture, the multi-layer coating comprising:

a polymeric layer overlying the surface of the article;

a metal layer overlying the polymeric layer comprising at least one atomized

metal;

a corrosion inhibiting inorganic layer overlying the metal layer; and

a transparent top coat layer overlying the corrosion inhibiting inorganic layer.

20. The multi-layer coating of claim 19 wherein the corrosion inhibiting inorganic layer is selected from the group consisting of one or more oxide, salt, and combination thereof of a metal selected from the group consisting of aluminum, cadmium, cobalt, cesium, copper, manganese, molybdenum, nickel, silicon, titanium, zinc, and zirconium.

21. The multi-layer coating of claim 19 wherein the top coat layer comprises an organic coating.

10 22. The multi-layer coating of claim 19 wherein the top coat layer comprises a ceramic coating.

23. The multi-layer coating of claim 19 wherein the top coat layer comprises an organopolysiloxane coating.

15 24. The multi-layer coating of claim 19 further comprising an adhesion promoting layer between the polymeric layer and the metal layer.

20 25. A multi-layer coating having a polished effect for the surface of an article of manufacture, the multi-layer coating comprising:
a first corrosion inhibiting inorganic coating overlying the surface of the article;
a polymeric layer overlying the first corrosion inhibiting inorganic coating;
a metal layer overlying the polymeric layer comprising at least one atomized metal;

25 a second corrosion inhibiting inorganic layer overlying the metal layer; and
a transparent top coat layer overlying the corrosion inhibiting inorganic layer;

wherein the first and second corrosion inhibiting inorganic coatings may be the same or different.

26. The multi-layer coating of claim 25 wherein the first and second corrosion inhibiting inorganic coatings are independently selected from the group consisting of one or more oxide, salt, and combination thereof of a metal selected from the group consisting of aluminum, cadmium, cobalt, cesium, copper, manganese, molybdenum, nickel, silicon, titanium, zinc, and zirconium.

10 27. The multi-layer coating of claim 25 wherein the top coat layer comprises an organic coating.

15 28. The multi-layer coating of claim 25 wherein the top coat layer comprises a ceramic coating.

29. The multi-layer coating of claim 25 wherein the top coat layer comprises an organopolysiloxane coating.

30. The multi-layer coating of claim 25 further comprising an adhesion promoting
20 layer between the polymeric coating and the metal layer.